



MODULAR ARCHITECTURAL INTERIORS dba ALUR

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ALUR GLASS WALL SYSTEM

CSI Sections:

- 10 22 00 Partitions
- 10 22 19 Demountable Partitions

1.0 RECOGNITION

Modular Architectural Interiors' ALUR Glass Wall System recognized in this report has been evaluated for use as a relocatable, floor-to-ceiling, non-load-bearing, non-fire-resistance-rated, interior wall partition. The structural performance properties of the ALUR Glass Wall System complies with the intent of the provisions of the following codes and regulations:

- 2021, 2018, and 2015 International Building Code® (IBC)
- 2019 California Building Code (CBC) – attached supplement
- 2020 City of Los Angeles Building Code (LABC)- attached supplement
- 2020 Florida Building Code®–Building (FBC, Building) – attached supplement

2.0 LIMITATIONS

Use of the ALUR Glass Wall System recognized in this report is subject to the following limitations:

- 2.1 The system shall be manufactured, identified, and installed in accordance with the IBC, this report, and the manufacturer's published installation instructions. Where conflicts exist, the more restrictive shall govern.
- 2.2 The maximum partition height is 10 feet (3048 mm).
- 2.3 Panel installation is limited to interior non-load-bearing applications.
- 2.4 Glass panels shall be installed vertically.
- 2.5 Wired, patterned, sandblasted, or non-vertical glass are outside of the scope of this report.
- 2.6 Use of the panels to support furniture loads is outside the scope of this report.

2.7 Lateral bracing of the ALUR Glass Wall System ceiling track shall be independent of the lateral bracing support of the building's ceiling grid, and shall conform to the requirements of this report, unless otherwise justified by a design professional and approved by the building official.

2.8 Anchorage of the ALUR Glass Wall System floor track shall conform to the requirements of this report, unless otherwise justified by a design professional and approved by the building official.

2.9 In Essential Facilities ($I_p = 1.5$), the maximum S_s mapped short period spectral acceleration is 2.13 for partition heights of 10 feet (3048 mm) and 2.59 for partition heights of 9.5 feet (2896 mm).

2.10 In Seismic Design Categories A and B where $I_p = 1.0$, the minimum panel width shall be 6 inches (152 mm) wide with one floor anchor. In Seismic Design Categories A and B where $I_p > 1.0$ and Seismic Design Categories C to F, the minimum panel width shall be 14 inches (356 mm) wide with a minimum of two floor anchors, except in cases where the supporting floor slab consists of 4 inch (102 mm) minimum thickness normal-weight concrete, in which case the minimum panel width may be 6 inches (152 mm) wide with one anchor.

2.11 Alur Glass Wall System is manufactured in An San-si, Gyeonggi-Do, South Korea.

2.12 Alur Glass Wall System is designed to withstand an inter-story drift up to 2% of the story height.

2.13 Alur Glass Wall System top and bottom tracks are designed to a maximum allowable deflection of $L/175$ or $3/4$ inch (19 mm) in accordance with IBC Section 2403.3. The center of glass deflection is limited to the lesser of $L/120$ or 1 inch (25 mm).

3.0 PRODUCT USE

3.1 **General:** The ALUR Glass Wall System is a relocatable, floor-to-ceiling, non-load-bearing, non-fire-resistance-rated, interior wall partition system consisting of glazed wall panels and aluminum tracks and posts designed to interface and connect with one another or with existing building walls.

The system may be used in any Occupancy, including Essential Facilities, and in buildings assigned to Seismic Design Categories A to F.

3.2 **Design:** When the wall system is installed in accordance with this report and the manufacturer's published instructions, the wall system resists the greater of the 5 psf (239 Pa) transverse design load specified in IBC Section

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





1607.13, or the seismic design forces for nonstructural components in Seismic Design Categories A and B, where $I_p > 1.0$, and in Seismic Design Categories C to F required in accordance with IBC Section 1613.1.

3.3 Installation: Installation shall be in accordance with the IBC, this report, and the manufacturer's published installation guide.

4.0 PRODUCT DESCRIPTION

4.1 Product Information: The wall system consists of glazed wall panels and doors, and extruded aluminum tracks, as shown in Figures 1 and 2 of this report.

4.2 Material Information:

4.2.1 Glazing: Tempered glass, ½ inch (12.7 mm) thick, with a maximum height of 10 feet (3048 mm) complies with ANSI Z97.1, Class A, and CPSC 16 CFR 1201, Category II as set forth in IBC Section 2406.2.

4.2.2 Aluminum Tracks and Posts: The members are extruded from 6063-T52 aluminum alloy with a minimum yield strength of 16,000 psi (110 MPa). Dimensional information is available from the manufacturer upon request.

4.2.3 Doors: The ALUR Glass Pivot Door is made of a full-height, frameless glass door leaf that is ½ inch (12.7 mm) thick and 35¾ inches (908 mm) wide, and operates with center pivot hinges, as shown in Figure 3 of this report.

The ALUR Wood Pivot Door is made of a full-height, frameless solid core door leaf that is 1¾ inches (44.5 mm) thick and 35¾ inches (908 mm) wide and operates with ¾ inch (19 mm) offset pivot hinges.

The ALUR Single Glass Sliding Door is made of full-height, frameless glass door leaf that is ½ inch (12.7 mm) thick and 41¹⁵/₁₆ inches (1065 mm) wide, and operates with a sliding mechanism concealed in the 81⁷/₈ inches (1249 mm) wide door track, as shown in Figure 4 of this report.

The ALUR Double Glass Sliding Door is made of two full-height, frameless glass door leaves that are 1½ inch (12.7 mm) thick and 36 inches (914 mm) wide each and operate with a sliding mechanism concealed in the 138⁷/₈ inch (3508 mm) wide door track.

Dimensional information of door hardware is available from the manufacturer upon request.

4.2.4 Fasteners: Bolts and screws connecting aluminum members shall be stainless, hot-dipped galvanized, or electro-galvanized steel.

4.2.5 Gaskets: Polyvinyl chloride acrylic, CAS No. 9002-86-2.

4.2.6 Shims: Acrylic shims for leveling bottom frame.

4.2.7 Floor Anchors: ¾ inch (9.5 mm) diameter Hilti Carbon Steel Kwik Bolt TZ (KB-TZ) with washer & hex nut installed in accordance with the manufacturer's instructions, with drilled hole depth and embedment depth in accordance with an evaluation report issued by an approved, accredited evaluation service; Periodic or Continuous Special Inspections are required in accordance with the evaluation report and spacing is four feet (1219 mm) maximum. Floor anchors may be installed into normal-weight or lightweight concrete in accordance with the evaluation report and as shown in [Figure 9](#) of this report.

4.2.8 Top Track Bracing from ALUR Wall Y-Bracket to Structural Level Above:

Option 1: 350S162-33 (1⁵/₈ inch by 3¹/₂ inch, No. 20 gauge) steel stud braces, at 1:1 angle, spaced eight feet (2438 mm) each side of the panel and alternating such that panel is braced at four feet (1219 mm) maximum, as shown in Figure 5 of this report.

Option 2: No. 12 gauge steel wires on each side of the panel, spaced four feet (1219 mm) feet maximum, at 1:1 angle, with a 350S162-33 (1⁵/₈ inch by 3¹/₂ inch, No. 20 gauge) steel stud vertical compression strut, spaced 12 feet (3658 mm) maximum. Braces and wires shall be anchored into the structure above as follows:

4.2.8.1 Un-topped Corrugated Metal Deck: (2) #6 self-drilling self-tapping sheet metal screws at each brace/wire, as shown in Figure 6 of this report.

4.2.8.2 Concrete Over Corrugated Metal Deck: ¾ inch (9.5mm) diameter Hilti Carbon Steel Kwik Bolt TZ2 (KB-TZ2) at each brace/wire with washer & hex nut installed in accordance with the manufacturer's instructions, as shown in Figure 7 of this report.

4.2.9 Top Track Bracing into Soffit (Designed and Framed by Others): The ALUR Glass wall top track may be anchored into a soffit as follows:

4.2.9.1 Wood-Framed Soffit: (1) ¼ inch diameter Simpson SDS screw at 24 inches on center and 6 inches maximum from end of top track, installed per manufacturer's instructions, as shown in Figure 8 of this report.

4.2.9.2 Cold-Formed Steel-Framed (CFS) Soffit: (1) ¼ inch diameter self-drilling self-tapping sheet metal screws with flat head at 24 inches on center and 6 inches maximum from the end of the top track, as shown in Figure 8 of this report.

The design of the soffit framing is outside the scope of this report. Documentation shall be submitted to the Building

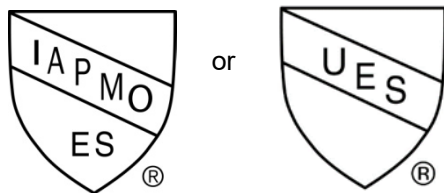


Official for approval demonstrating the soffit is designed for the applicable loads.

5.0 IDENTIFICATION

5.1 Identification of the system components is made on the packaging of the individual components, labeled “ALUR Glass Wall”.

5.2 Glazing Identification: Each pane shall bear the glass manufacturer’s permanent identification mark designating the manufacturer, type and thickness of the glass, and an indication of the safety glazing standard(s) including “16 CFR 1201-I, II”. The identification mark shall be acid etched, sandblasted, ceramic fired, laser-etched, embossed, or a type that, once applied, cannot be removed without being destroyed.



IAPMO UES ER-193

6.0 SUBSTANTIATING DATA

Structural calculations in accordance with IBC.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Modular Architectural Interiors ALUR Glass Wall System to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Alur Glass Wall System is produced at locations noted in Section 2.11 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

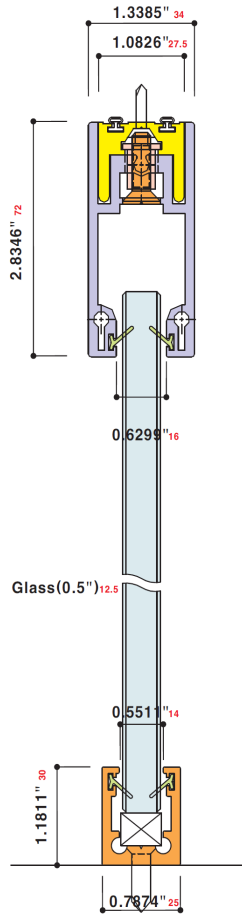


FIGURE 1 – TYPICAL CROSS-SECTION OF GLAZED WALL PANEL

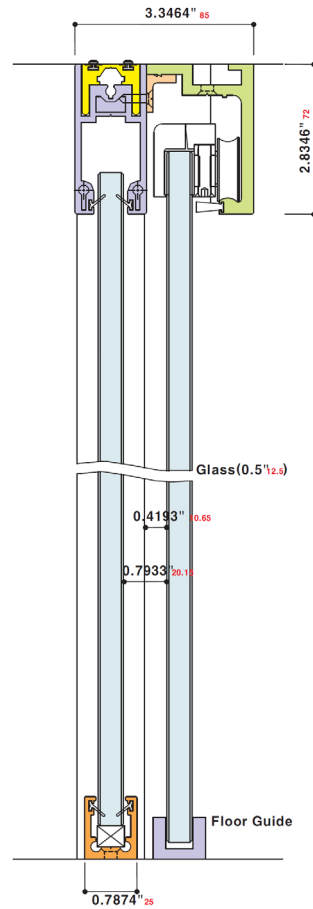


FIGURE 2 – TYPICAL CROSS-SECTION OF SLIDING DOOR

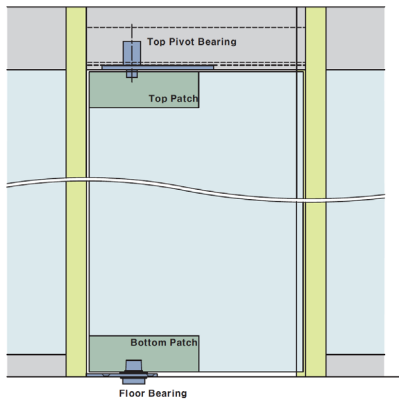


FIGURE 3 – TYPICAL ELEVATION OF GLASS PIVOT DOOR

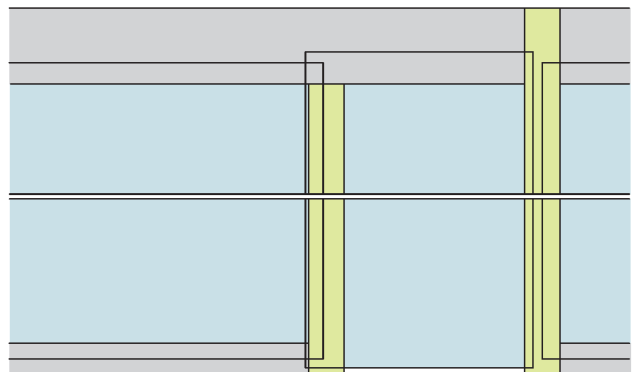


FIGURE 4 – TYPICAL ELEVATION OF SINGLE GLASS SLIDING DOOR

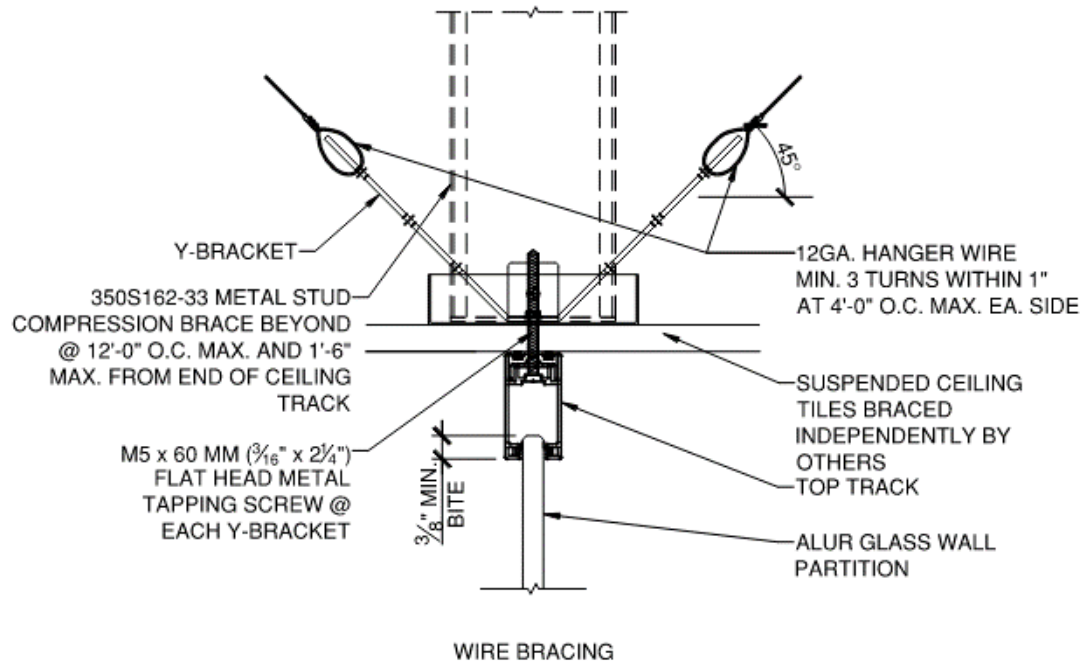
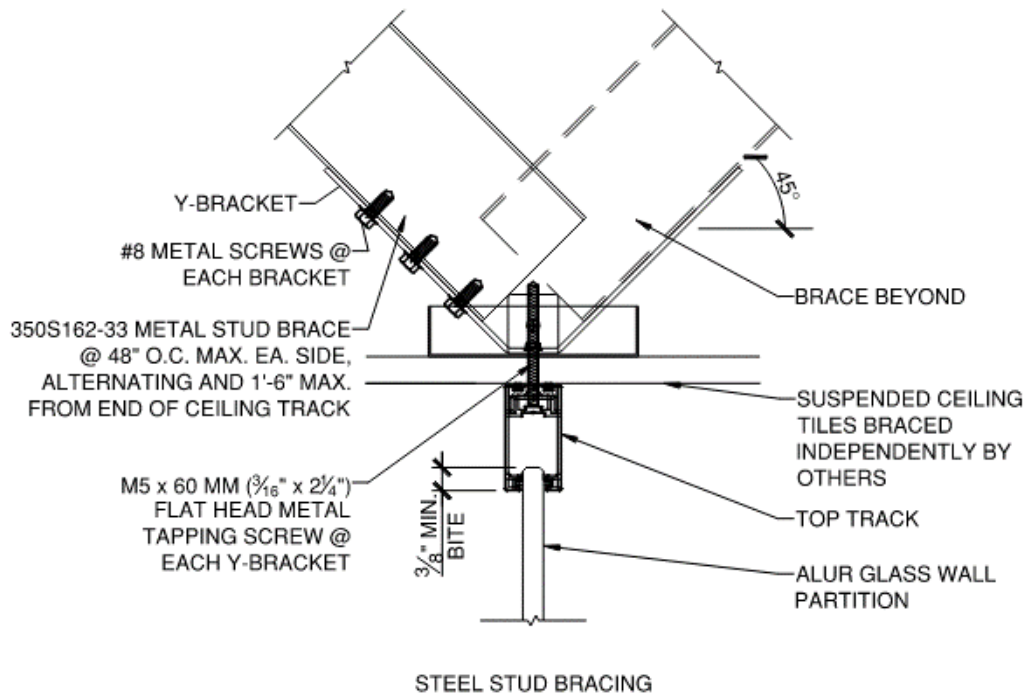


FIGURE 5 - TOP TRACK BRACING

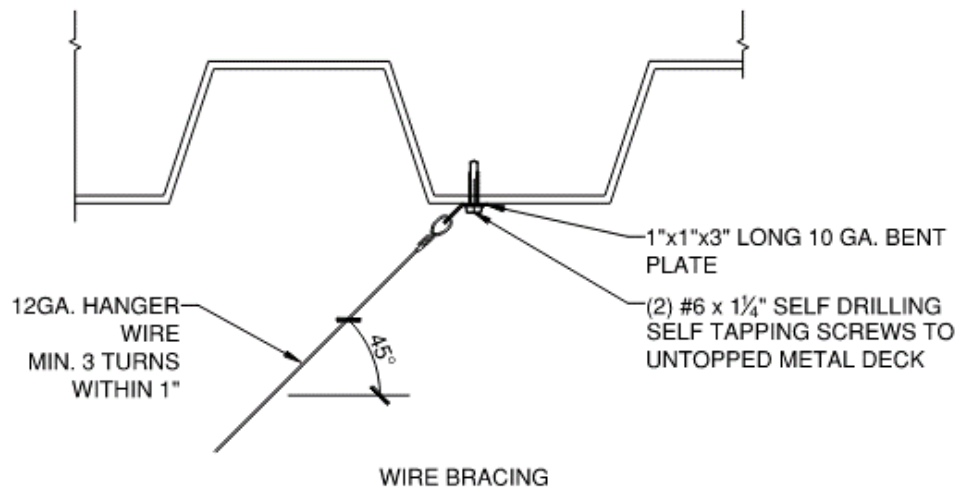
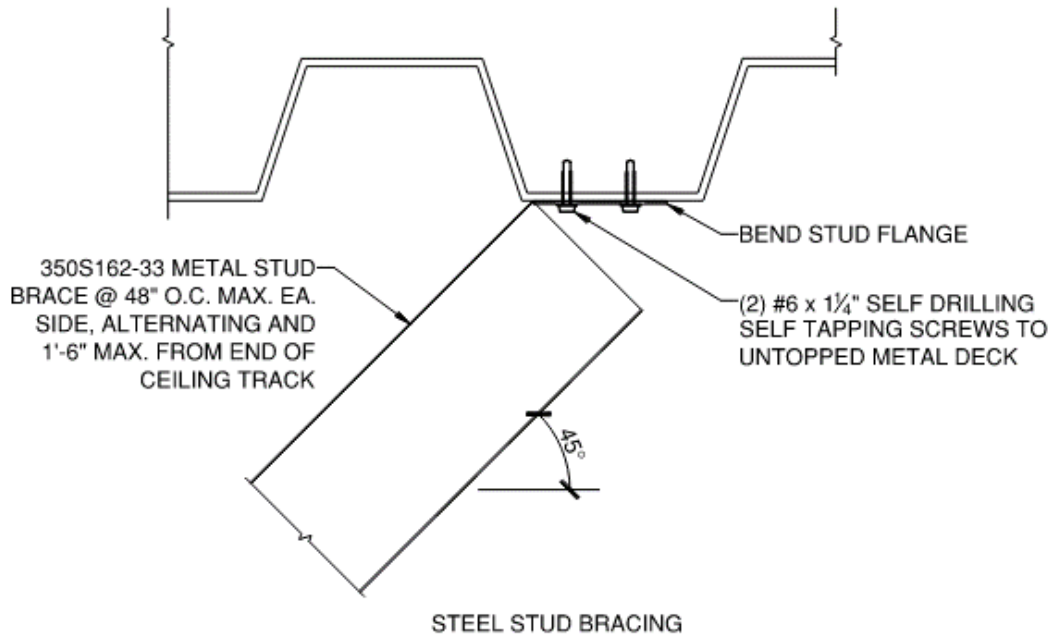


FIGURE 6 - BRACE TO METAL DECK

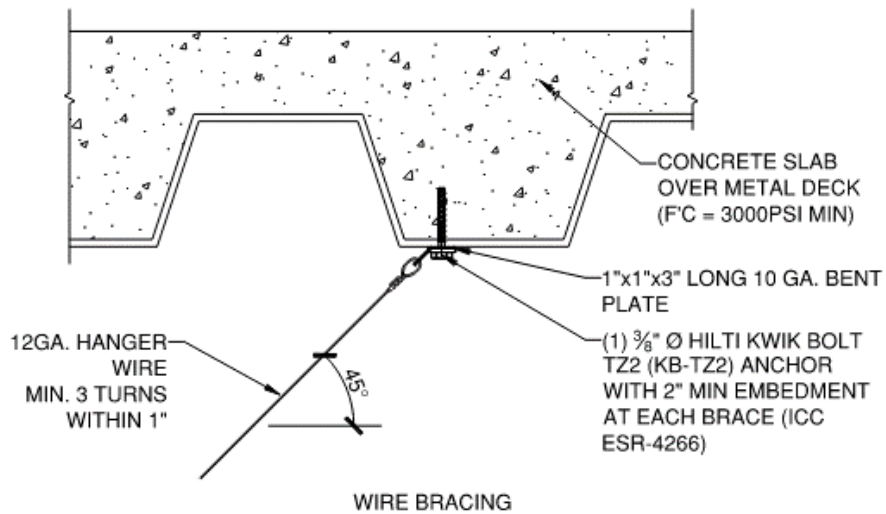
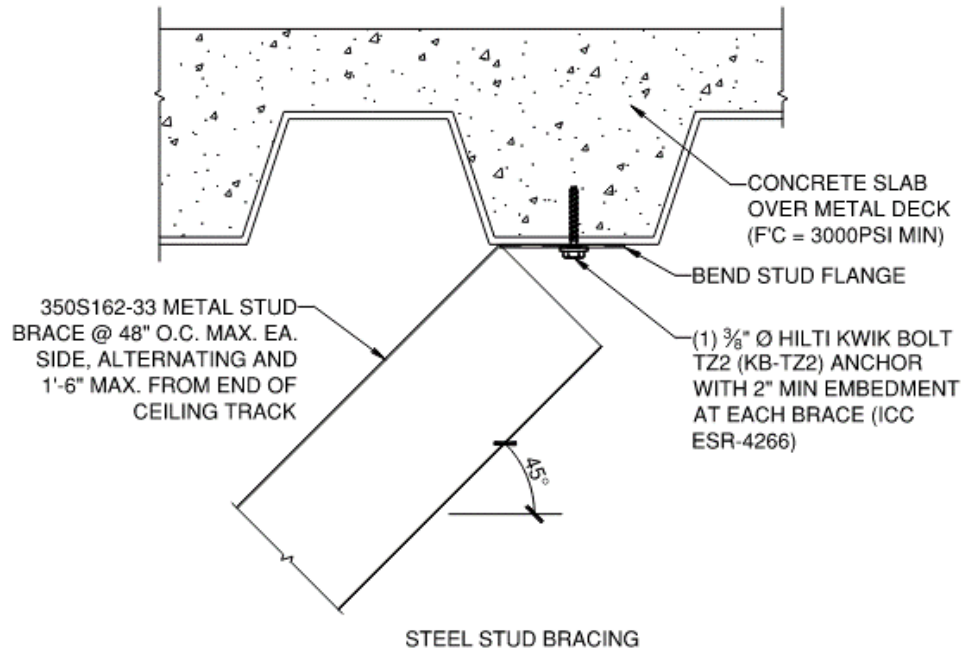
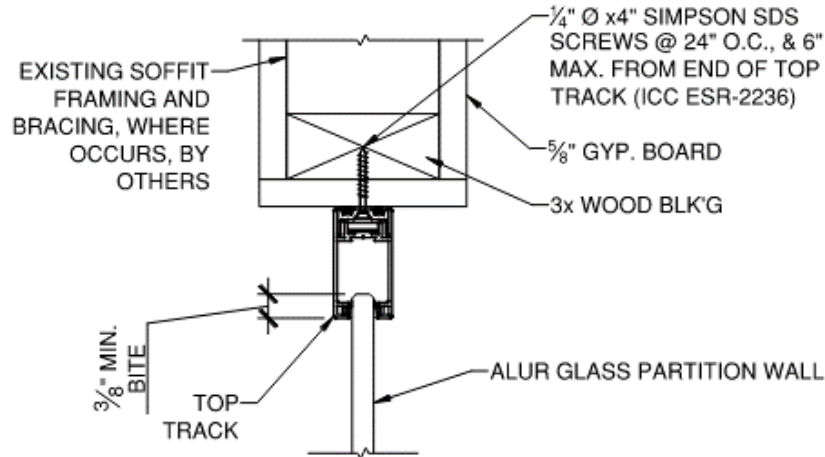


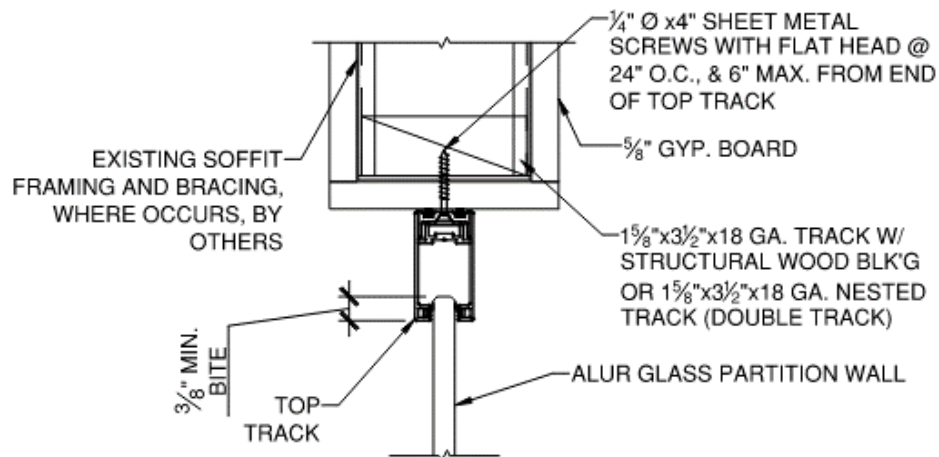
FIGURE 7 - BRACE TO CONCRETE OVER METAL DECK



NOTES:

1. MINIMUM EDGE DISTANCE OF SCREWS = 1.5 x ANCHOR DIAMETER
2. MINIMUM (2) ANCHORS AT GIVEN MAX. O.C. SPACING PER TOP TRACK SECTION.

WOOD FRAMED SOFFIT



NOTES:

1. MINIMUM EDGE DISTANCE OF SCREWS = 1.5 x ANCHOR DIAMETER
2. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHOULD NOT BE LESS THAN 3 EXPOSED THREADS.
3. MINIMUM (2) ANCHORS AT GIVEN MAX. O.C. SPACING PER TOP TRACK SECTION.

COLD-FORMED METAL FRAMED SOFFIT

FIGURE 8 - TOP TRACK ANCHORAGE TO SOFFIT FRAMING

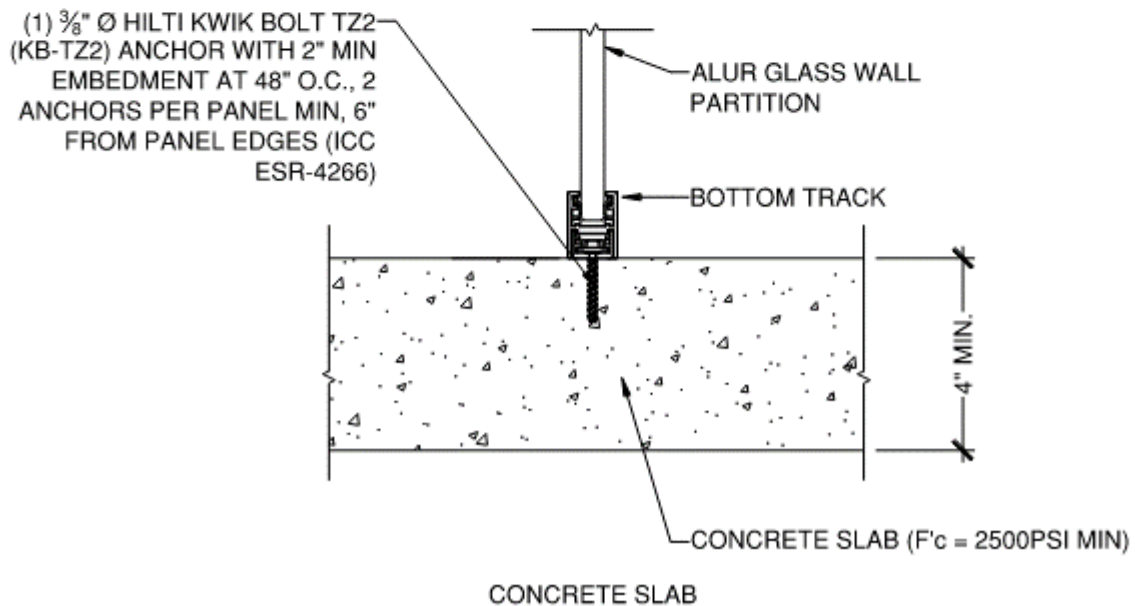
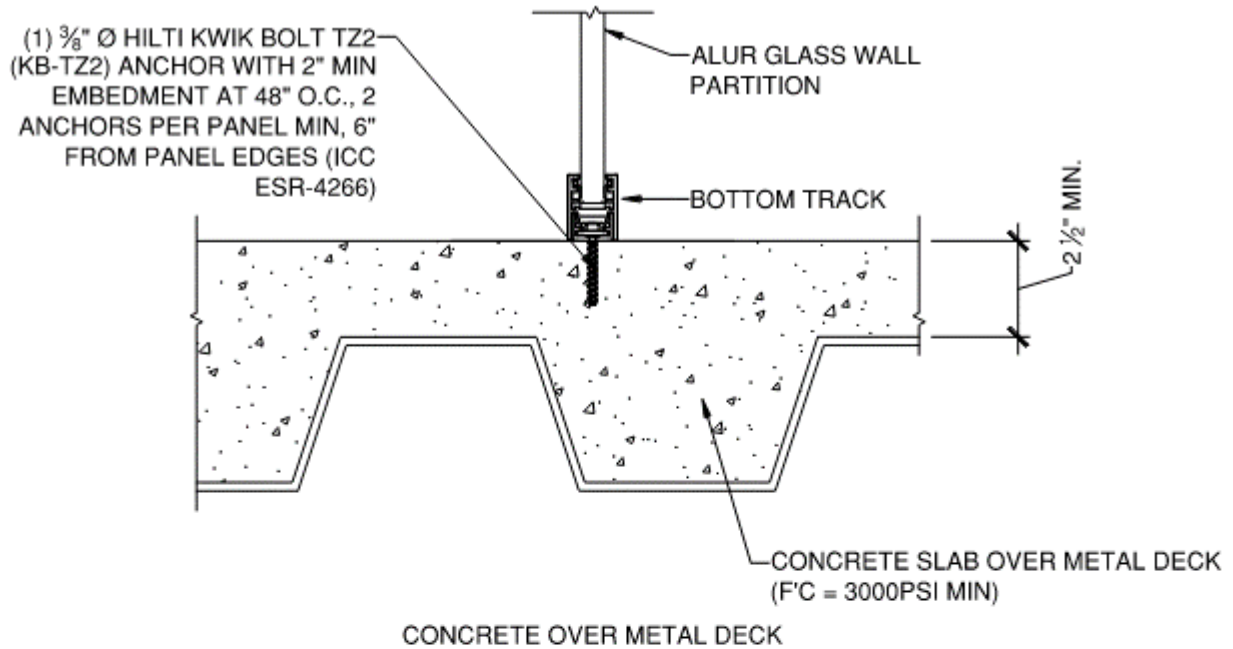


FIGURE 9 – BOTTOM TRACK ANCHORAGE



CALIFORNIA SUPPLEMENT

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ALUR GLASS WALL SYSTEM

CSI Sections:

10 22 00 Partitions

10 22 19 Demountable Partitions

1.0 SCOPE OF EVALUATION

1.1 Compliance with the following codes:

- 2019 California Building Code (CBC)

1.2 Evaluated in accordance with:

- CBC Chapter 16
- CBC Chapter 20
- CBC Chapter 24

1.3 The safety glazing complies with:

Consumer Product Safety Commission (CPSC) 16 CFR 1201
Safety Standard for Architectural Glazing Material,
Category II
ANSI Z97.1, Class A

1.4 Properties assessed:

- Structural

2.0 FINDINGS

The ALUR Glass Wall System described in IAPMO UES
Evaluation Report ER-193 complies with the 2019 CBC.

Design and Installation shall be in accordance with ER-193
and Chapters 14 and 25 of the CBC.

This supplement expires concurrently with ER-193.

3.0 ADDITIONAL REQUIREMENTS

1. Compliance with DSA and OSHPD requirements is outside of the scope of this evaluation report.
2. For DSA and OSHPD projects, compliance with CBC Section 2403.2.1 is required. Detailed construction documents and detailed shop drawings and analysis assuring safe performance for the specific installation shall be prepared by a Structural Engineer registered in the State of California and submitted to the enforcement agency for approval.

4.0 SUBSTANTIATING DATA

Structural calculations in accordance with CBC.

For additional information about this evaluation report please visit
www.uniform-es.org or email us at info@uniform-es.org



CITY OF LOS ANGELES SUPPLEMENT

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ALUR GLASS WALL SYSTEM

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1.0 RECOGNITION

The ALUR Glass Wall System, as evaluated and represented in UES Evaluation Report ER-193 and with changes as noted in the California Supplement and this supplement, is a satisfactory alternative for use in buildings built under the following code:

- 2020 City of Los Angeles Building Code (LABC)

2.0 LIMITATIONS

Use of the ALUR Glass Wall System recognized in ER-193 and this supplement is subject to the following limitations:

2.1 The design, installation, conditions of use, and identification of the ALUR Glass Wall System shall be in accordance with the 2018 International Building Code and the 2018 International Residential Code, as applicable, as noted in ER-193; and the California Supplement, as applicable.

2.2 Prior to installation, calculations and details demonstrating compliance with this approval report and the 2020 Los Angeles Building Code shall be submitted to the structural plan check section for review and approval.

2.3 Plans and calculations shall bear the stamp and signature of a California registered civil or structural engineer or architect.

2.4 The design and installation of the ALUR Glass Wall System shall be in accordance with LABC Chapters 16 and 17, as applicable.

2.5 This supplement expires concurrently with ER-193.

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FLORIDA SUPPLEMENT

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ALUR GLASS WALL SYSTEM

CSI Sections:

10 22 00 Partitions

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1.0 RECOGNITION

The ALUR Glass Wall System, as recognized in UES ER-193, has been evaluated for compliance with the following code:

- 2020 Florida Building Code®–Building (FBC, Building)

ALUR Glass Wall System’s compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code®–Building is outside of the scope of this evaluation report.

2.0 LIMITATIONS

ALUR Glass Wall System, as recognized in UES ER-193 and this supplement, is subject to the following limitations:

2.1 Design requirements shall be determined in accordance with the Florida Building Code®–Building.

2.2 Use and installation of the Alur Glass Wall System shall be in accordance with the 2018 International Building Code® provisions of UES ER-193, unless otherwise noted in this supplement.

2.3 Installation shall be in accordance with Section 1403.8 of the Florida Building Code–Building.

2.4 Verification that the report holder’s quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission (or the building official when the report holder does not possess an approval by the Commission), to provide oversight and determine that the products are being manufactured as described in this evaluation report to establish continual product performance shall be provided for products falling under Section (5)(d) of Florida Rule 61G20-3.008.

2.5 This supplement expires concurrently with ER-193.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org